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September 7, 2009

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Mr. Charles Terreni, Chief Clerk and Administrator  
Public Service Commission of South Carolina  
101 Executive Center Dr., Suite 100  
Columbia, SC 29210

PSC SC  
MAIL / DMS

**New Schedule Uncertainty in Licensing of AP1000 Nuclear Reactor for SCE&G Project,**  
**Docket 2009-293-E Impacted**

Dear Mr. Terreni:

The S.C. Public Service Commission will hopefully be aware of the recent letter by the Nuclear Regulatory Commission which reveals that the review schedule for the final design certification of the AP1000 reactor is once again up in the air.

Given that the AP100 reactor design is the one chosen by SCE&G for its nuclear reactor project, it is essential that the PSC, Office of Regulatory Staff and other parties to the docket closely examine the potential schedule impacts to the SCE&G nuclear project and address this matter in the course of proceedings related to docket 2009-293-E and future dockets.

I am thus entering into the record the following items:

1. NRC letter of August 27, 2009 concerning yet another "revised schedule" for approval of the AP1000 design certification amendment. The letter to Westinghouse electric Company states that

*"Westinghouse has not met its commitments to provide the necessary design information in a timely manner and as a result has further impacted the review schedule."*

This letter was e-mailed by NRC staff but does not yet appear to be filed in the NRC's digital library (ADAMS), where the reference number is supposed to be ML092380077.

2. Charlotte Business Journal article of September 4, 2009, entitled ***Nuclear Revival May Not Arrive on Schedule.***

[http://charlotte.bizjournals.com/charlotte/blog/power\\_city/2009/09/nuclear\\_revival\\_may\\_not\\_arrive\\_on\\_schedule.html](http://charlotte.bizjournals.com/charlotte/blog/power_city/2009/09/nuclear_revival_may_not_arrive_on_schedule.html))

*"...there are signs that the approval process for AP1000...may fall off schedule."*

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3. Augusta (GA) Chronicle article of September 3, 2009, entitled ***Nuclear regulators seek data on reactor designs.***

[http://chronicle.augusta.com/stories/2009/09/03/met\\_546783.shtml](http://chronicle.augusta.com/stories/2009/09/03/met_546783.shtml)

*"The process for licensing new reactors for Plant Vogtle and similar nuclear projects could be delayed because of the absence of data needed to certify the new reactor's design, according the U. S. Nuclear Regulatory Commission."*

I request that the PSC staff pursue more information about this potential delay in the AP1000 review schedule. In particular, I request that the PSC review recent NRC meetings with both the "industry's design-centered working group" and the "industry's AP1000 working group." Summaries of these meetings should soon be placed the NRC's on-line digital library.

Thank you very much for placing the attached documents on the docket website and for your full review of schedule impacts as discussed by the NRC staff. I look forward to noting your thorough review of the NRC's information related to potential impacts to the AP1000 design review schedule as part of docket 2009-293-E proceedings.

Sincerely,

A handwritten signature in black ink that reads "Tom Clements". The signature is written in a cursive, slightly slanted style.

Tom Clements  
Southeastern Nuclear Campaign Coordinator

## Nuclear Regulatory Commission

(ML092380077 in the NRC's ADAMS digital library – not posted as of 9/06/2009)

August 27, 2009

Mr. Robert Sisk, Manager  
AP1000 Licensing and Customer Interface  
Nuclear Power Plants  
Westinghouse Electric Company  
P.O. Box 355  
Pittsburgh, PA 15230-0355

Dear Mr. Sisk:

By letter dated April 3, 2009, the U.S. Nuclear Regulatory Commission (NRC) revised its review schedule for the AP1000 Design Certification Amendment. In that letter, we outlined how the schedule revision was necessitated by Westinghouse's inability to make adequate design information available to the staff. With regard to our review of the proposed Design Control Document (DCD), Chapter 6, "Engineered Safety Features," Westinghouse has not met its commitments to provide the necessary design information in a timely manner and as a result has further impacted the review schedule.

Specifically, Westinghouse has not provided the design information necessary to resolve staff concerns on the containment sump design. During the week of August 10-14, 2009, the staff participated in two substantive telephone conferences about the resolution of technical issues associated with the containment sump. These staff activities were precipitated by the receipt of technical reports on the containment sump performance and downstream effects. The substance and status of these issues and their impacts on the current schedule are discussed in more detail below.

As part of the staff's plan to issue a safety evaluation on Chapter 6 of the AP1000 DCD that supported the Phase 2 schedule outlined in the NRC's April 3, 2009 letter, the staff expected submittal of information addressing sump design and long-term cooling effects by the end of June 2009. Following issuance of the revised schedule, the staff worked with Westinghouse to assure that there was a clear understanding of the information needed in the June 2009 submittal to support the staff's review and to maintain the established schedule. When the staff was informed that the information would not be submitted by the end of June 2009, the staff continued to work with Westinghouse to assure that all information needs would be provided in an attempt to maintain the agreed-upon schedule.

The staff received the subject submittal at the end of July 2009 and has reviewed the information relative to addressing long-term cooling effects. The submitted information failed to resolve the long-standing fundamental questions related to the design basis debris source term, the limiting system flows, in-vessel testing, the magnitude of debris bypassing the sump screens, and the choice of the limiting accident scenario. The staff had planned to meet with Westinghouse on August 25, 2009; however, that meeting has been delayed at your request until the week of August 31, 2009. Given the fundamental nature of the questions raised by the

R. Sisk

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recent submittal and the delay in meeting with the NRC on resolving these issues, the staff is no longer able to support an Advisory Committee on Reactor Safeguards (ACRS) briefing on Chapter 6 in November 2009.

We will meet with the ACRS to discuss a revised schedule after the staff receives the information from Westinghouse and determines when it will be able to complete its safety evaluation with OIs. We will inform Westinghouse of the new dates when they are established.

Sincerely,

*/RA/*

David B. Matthews, Director  
Division of New Reactor Licensing  
Office of New Reactors

Docket No. 52-006

# Charlotte Business Journal

Charlotte, North Carolina

Blog: POWER CITY

[http://charlotte.bizjournals.com/charlotte/blog/power\\_city/2009/09/nuclear\\_revival\\_may\\_not\\_arrive\\_on\\_schedule.html](http://charlotte.bizjournals.com/charlotte/blog/power_city/2009/09/nuclear_revival_may_not_arrive_on_schedule.html)

## NUCLEAR REVIVAL MAY NOT ARRIVE ON SCHEDULE

Friday, September 4, 2009

As Duke Energy considers as much as a three-year delay in building the proposed Lee Nuclear Station, there are signs that the approval process for AP1000 — the reactor chosen for Lee and most new plants planned in the Southeast — may fall off schedule.

At issue is certification of the reactor design for Plant Vogtle, the dual-reactor plant being built in Georgia by the Southern Co.

The power industry hopes to cut licensing and construction times — and thus save money — by building plants on a few standardized reactor models. The idea is that the Nuclear Regulatory Commission can certify one standard reactor model for a plant and then subsequent plants using the same model will not need to get new certifications.

### **Westinghouse blamed**

Vogtle is the lead plant for the wave that will be built on the AP1000. So a delay, if significant, could affect plants planned in Florida, South Carolina and North Carolina.

An NRC spokesman tells the *Augusta Chronicle* it is too early to tell whether the current delay in approving some safety features will result in an overall delay in certification. But it is clear that the commission cannot now get its review of certain safety features accomplished by November as planned.

The NRC blames Westinghouse Electric Co., designer of the AP1000, for the delay. In a letter last week to Westinghouse, the NRC's New Reactor Licensing division complains the company has been slow to submit "necessary design information" on engineered safety features. And it says the information, when submitted, "failed to resolve the long-standing fundamental questions."

## **Missed deadline**

The schedule for the review had already been delayed once. But in June, the NRC says, Westinghouse missed a new deadline. And more delays followed, according to the letter:

The staff received the subject submittal at the end of July 2009.... The submitted information failed to resolve the long-standing fundamental questions related to the design basis debris source term, the limiting system flows, in-vessel testing, the magnitude of debris bypassing the sump screens, and the choice of the limiting accident scenario.

The staff had planned to meet with Westinghouse on August 25, 2009; however, that meeting has been delayed at your request until the week of August 31, 2009. Given the fundamental nature of the questions raised by the recent submittal and the delay in meeting with the NRC on resolving these issues, the staff is no longer able to support an Advisory Committee on Reactor Safeguards briefing ... in November.

## **Charlotte's stake**

The delay may be nothing more than a hiccup. But business leaders and economic developers in Charlotte may want to keep an eye on Duke's plans and the progress of the AP1000.

Economic developers have concentrated on attracting nuclear energy related companies to the region over the past couple of years. Those efforts have been successful. Westinghouse, the Shaw Power Group and Toshiba — partners in the AP1000 — all have growing presences here. The French company Areva SA also has important operation in the region.

The growth in nuclear energy business here is related to the broader plan to turn Charlotte into a national energy hub.

# Nuclear regulators seek data on reactor designs

By Rob Pavey | Staff Writer

Thursday, September 03, 2009

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The process of licensing new reactors for Plant Vogtle and similar nuclear projects could be delayed because of the absence of data needed to certify the new reactor's design, according to the U.S. Nuclear Regulatory Commission.

Southern Nuclear's Plant Vogtle and utilities in South Carolina, Florida, Alabama and North Carolina are planning projects that will use the new AP1000 reactors to be manufactured by Westinghouse.

Part of the commission's role is to certify the design of the new reactors -- a process that must be completed before applicants can be issued a "combined operating license" to authorize actual construction.

In an Aug. 27 letter to Robert Sisk, Westinghouse's manager of AP1000 licensing and customer interface, the Nuclear Regulatory Commission warned that important review schedules have been repeatedly revised because of the company's "inability to make adequate design information available to the staff."

In particular, the letter said, a chapter on engineered safety features is not complete. "Westinghouse has not met its commitments to provide the necessary design information in a timely manner and as a result has further impacted the review schedule."

The NRC's concerns included technical issues associated with the containment sump and its performance and downstream effects, said the letter, written by David B. Matthews, director of the NRC's Division of New Reactor Licensing.

Westinghouse had been warned earlier this year -- in an April 3 letter from Mr. Matthews -- that continued delays in certification of the reactor's design could affect the issuance of combined operating licenses sought by utilities planning to build new reactors.

Roger Hannah, an NRC spokes man in Atlanta, said it is too early to tell whether the delays will change construction schedules for new plants.

"But the bottom line is, we would not issue a COL (combined operating license) until a final rule was finished certifying the reference design," he said.

Plant Vogtle is already at an advanced stage of its application, having recently received its Early Site Permit that is a precursor to obtaining the combined operating license.

Beth Thomas, a spokesman for Southern Nuclear, the plant's parent company, said it is unlikely any design issues would affect the new reactors' projected startup dates.

"We don't anticipate any changes to our commercial operation date based on this development," she said. Vogtle's Unit 3 is projected to start operations in 2016 and Unit 4 is scheduled to go online in 2017.

Tom Clements, southeastern nuclear campaign director for Friends of the Earth, said the design certification was supposed to be finished in 2006.

"It thus seems that we are once again at the place where no AP1000 certification schedule exists and the summer 2012 time-frame for final reactor approval may once again be in jeopardy," Mr. Clements said.

**Augusta Chronicle     Augusta, Georgia**

**[http://chronicle.augusta.com/stories/2009/09/03/met\\_546783.shtml](http://chronicle.augusta.com/stories/2009/09/03/met_546783.shtml)**